

CLAIMS

1. A kit for use in bleaching and desensitizing a person's teeth, comprising:

at least one substantially solid dental bleaching composition having a tray-like configuration and comprising at least one dental bleaching agent and at least one tooth adhesion agent having increased adhesiveness to teeth when said dental bleaching composition is moistened by saliva or water and

at least one substantially solid dental desensitizing composition having a tray-like configuration and comprising at least one dental desensitizing agent and at least one tooth adhesion agent having increased adhesiveness to teeth when said desensitizing composition is moistened by saliva or water.

2. A kit as defined in claim 1, at least one of said dental bleaching composition or said desensitizing composition being initially horseshoe shaped prior to use so as to at least approximately conform to a person's dental arch with minimal longitudinal shaping.

3. A kit as defined in claim 1, at least one of said dental bleaching composition or said desensitizing composition having a longitudinal curvature that is less than the curvature of a person's dental arch prior to use so that additional longitudinal curving is required when said bleaching or desensitizing composition is placed over a person's teeth.

4. A kit as defined in claim 1, at least one of said dental bleaching composition or said desensitizing composition having a substantially straight longitudinal profile prior to use so that longitudinal curving is required when said bleaching or desensitizing composition is placed over a person's teeth.

5. A kit as defined in claim 1, at least a portion of said trough of at least one of said dental bleaching composition or said desensitizing composition having an approximate U-shaped cross section.

6. A kit as defined in claim 1, at least a portion of said trough at least one of said dental bleaching composition or said desensitizing composition having an approximate V-shaped cross section.

7. A kit as defined in claim 1, at least a portion of said trough at least one of said dental bleaching composition or said desensitizing composition having an approximate L-shaped cross section.

8. A kit as defined in claim 1, at least a portion of said trough at least one of said dental bleaching composition or said desensitizing composition having approximately a rectangular or trapezoidal cross section.

9. A kit as defined in claim 1, said dental bleaching agent comprising at least one of carbamide peroxide, metal peroxide, percarbonate, perborate, peroxy acid, peroxy acid salt, chlorite, or hypochlorite.

10. A kit as defined in claim 1, said dental bleaching agent having a concentration in a range of about 5% to about 80% by weight of said dental bleaching composition.

11. A kit as defined in claim 1, said dental bleaching agent having a concentration in a range of about 10% to about 60% by weight of said dental bleaching composition.

12. A kit as defined in claim 1, said dental bleaching agent having a concentration in a range of about 20% to about 50% by weight of said dental bleaching composition.

13. A kit as defined in claim 1, said dental desensitizing agent comprising at least one of potassium nitrate, other potassium salts, citric acid, citrates, strontium chloride, sodium fluoride, or stannous fluoride.

14. A kit as defined in claim 1, said dental desensitizing agent having a concentration in a range of about 0.01% to about 50% by weight of said desensitizing composition.

15. A kit as defined in claim 1, said dental desensitizing agent having a concentration in a range of about 0.5% to about 25% by weight of said desensitizing composition.

16. A kit as defined in claim 1, said dental desensitizing agent having a concentration in a range of about 0.1% to about 10% by weight of said desensitizing composition.

17. A kit as defined in claim 1, said tooth adhesion agent comprising polyvinyl pyrrolidone.

18. A kit as defined in claim 1, said tooth adhesion agent comprising at least one of carboxypolymethylene, polyethylene oxide, polyacrylic acid, copolymer of polyacrylic acid, polyacrylate, polyacrylamide, copolymer of polyacrylic acid and polyacrylamide, PVP-vinyl acetate copolymer, carboxymethylcellulose, carboxypropylcellulose, polysaccharide gum, or protein.

19. A kit as defined in claim 1, said tooth adhesion agent having a concentration in a range of about 10% to about 90% by weight of said bleaching composition or said desensitizing composition.

20. A kit as defined in claim 1, said tooth adhesion agent having a concentration in a range of about 20% to about 80% by weight of said bleaching composition or said desensitizing composition.

21. A kit as defined in claim 1, said tooth adhesion agent having a concentration in a range of about 40% to about 75% by weight of said bleaching composition or said desensitizing composition.

WORKMAN NYDEGGER
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84111

22. A kit as defined in claim 1, wherein at least one of said dental bleaching composition or said desensitizing composition is sized and configured so as to approximately terminate at or near a person's gingival margin when said dental bleaching composition or said dental desensitizing composition is in use.

23. A kit as defined in claim 1, wherein at least one of said bleaching composition or said desensitizing composition is contained within a sealed package prior to use.

24. A kit as defined in claim 1, further comprising a barrier layer comprising a moisture-resistant material adjacent to an outer surface of at least one of said bleaching composition or said desensitizing composition that protects said bleaching or desensitizing composition from saliva or moisture when in use.

25. A kit as defined in claim 24, said barrier layer being flexible so that it will readily conform to the shape of a person's teeth when in use.

26. A kit as defined in claim 24, said barrier layer comprising at least one polyolefin.

27. A kit as defined in claim 26, said polyolefin comprising at least one of polyethylene, high density polyethylene, low density polyethylene, ultra-low density polyethylene, polypropylene, or polytetrafluoroethylene.

28. A kit as defined in claim 24, said barrier layer comprising at least one of wax, metal foil, paraffin, ethylene-vinyl acetate copolymer, ethylene-vinyl alcohol copolymer, polycaprolactone, polyester, polycarbonate, polyurethane, polyamide, or polyesteramide.

WORKMAN NYDEGGER
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84111

29. A kit for use in bleaching and desensitizing a person's teeth, comprising:
- at least one dental bleaching device that comprises:
- a first barrier layer comprising a moisture-resistant material and having a tray-like configuration; and
- a bleaching layer adjacent said first barrier layer comprising a substantially solid dental bleaching composition comprising at least one dental bleaching agent and at least one tooth adhesion agent having increased adhesiveness to teeth when said bleaching layer is moistened by saliva or water; and
- at least one dental desensitizing device that comprises:
- a second barrier layer comprising a moisture-resistant material and having a tray-like configuration; and
- a desensitizing layer adjacent said second barrier layer comprising a substantially solid dental desensitizing composition comprising at least one dental desensitizing agent and at least one tooth adhesion agent having increased adhesiveness to teeth when said dental desensitizing layer is moistened by saliva or water.
30. A kit as defined in claim 29, at least one of said first or second barrier layers being initially horseshoe shaped prior to use so as to at least approximately conform to a person's dental arch with minimal longitudinal shaping.

31. A kit as defined in claim 29, at least one of said first or second barrier layers having a longitudinal curvature that is less than the curvature of a person's dental arch prior to use so that additional longitudinal curving is required when said dental bleaching device or said dental desensitizing device is placed over a person's teeth.

32. A kit as defined in claim 29, at least one of said first or second barrier layers having a substantially straight longitudinal profile prior to use so that longitudinal curving is required when said dental bleaching composition or said dental desensitizing composition is placed over a person's teeth.

33. A kit as defined in claim 29, at least a portion of said trough of at least one of said first or second barrier layers having an approximate U-shaped cross section.

34. A kit as defined in claim 29, at least a portion of said trough at least one of said first or second barrier layers having an approximate V-shaped cross section.

35. A kit as defined in claim 29, at least a portion of said trough at least one of said first or second barrier layers having an approximate L-shaped cross section.

36. A kit as defined in claim 29, at least a portion of said trough at least one of said first or second barrier layers having an approximately rectangular or trapezoidal cross section.

37. A kit as defined in claim 29, said dental bleaching agent comprising at least one of carbamide peroxide, metal peroxide, percarbonate, perborate, peroxy acid, peroxy acid salt, chlorite, or hypochlorite.

38. A kit as defined in claim 29, said desensitizing agent comprising at least one of potassium nitrate, other potassium salts, citric acid, citrates, strontium chloride, sodium fluoride, or stannous fluoride.

39. A kit as defined in claim 29, said tooth adhesion agent comprising polyvinyl pyrrolidone.

40. A kit as defined in claim 29, said tooth adhesion agent comprising at least one of carboxypolymethylene, polyethylene oxide, polyacrylic acid, copolymer of polyacrylic acid, polyacrylate, polyacrylamide, copolymer of polyacrylic acid and polyacrylamide, PVP-vinyl acetate copolymer, carboxymethylcellulose, carboxypropylcellulose, polysaccharide gum, or protein.

41. A kit as defined in claim 29, wherein at least one of said first or second barrier layers is sized and configured so as to approximately terminate at or near a person's gingival margin when said dental bleaching device or said dental desensitizing device is in use.

42. A kit as defined in claim 29, wherein at least one of said dental bleaching device or said dental desensitizing device is contained within a sealed package prior to use.

43. A kit as defined in claim 29, at least one of said first or second barrier layers being flexible so that it will readily conform to the shape of a person's teeth when in use.

44. A kit as defined in claim 29, at least one of said first or second barrier layers comprising at least one polyolefin.

45. A kit as defined in claim 29, at least one of said first or second barrier layers comprising at least one of wax, metal foil, paraffin, ethylene-vinyl acetate copolymer, ethylene-vinyl alcohol copolymer, polycaprolactone, polyester, polycarbonate, polyurethane, polyamide, or polyesteramide.

46. A method for bleaching and desensitizing a person's teeth, comprising:

(1) placing a substantially solid dental bleaching composition having a tray-like configuration over the person's teeth for a desired period of time, said bleaching composition comprising:

at least one dental bleaching agent; and

at least one tooth adhesion agent having increased adhesiveness to teeth when said bleaching composition is moistened by saliva or water;

(2) removing said dental bleaching composition;

(3) placing a substantially solid dental desensitizing composition having a tray-like configuration over the person's teeth for a desired period of time, said desensitizing composition comprising:

at least one dental desensitizing agent; and

at least one tooth adhesion agent having increased adhesiveness to teeth when said dental desensitizing composition is moistened by saliva or water; and

(4) removing said dental desensitizing composition.

47. A method as defined in claim 46, wherein acts (1) and (2) are performed prior to acts (3) and (4).

48. A method as defined in claim 46, wherein acts (3) and (4) are performed prior to acts (1) and (2).

49. A method as defined in claim 46, at least one of said dental bleaching composition or said dental desensitizing composition further comprising a moisture-resistant barrier layer adjacent thereto.

50. A method as defined in claim 49, said barrier layer being applied to said at least one dental bleaching composition or said dental desensitizing composition immediately prior to placing said dental bleaching composition or said dental desensitizing composition over the person's teeth.

51. A method as defined in claim 49, said barrier layer being attached to said at least one dental bleaching composition or said dental desensitizing composition during manufacture of said dental bleaching composition or said dental desensitizing composition.

WORKMAN NYDEGGER
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84111